UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/465,318	12/17/1999	INDRANIL BOB TAPADAR	71493-649	8752

7590 08/04/2004	EXAMINER
SMART & BIGGAR	AZAD, ABUL K
16192 BIMINI	

ART UNIT	PAPER NUMBER
2654	

SMART & BIGGAR
16192 BIMINI
PO BOX 2999 STATION D
900 55 METCALFE STREET
OTTAWA,   K1P5Y6
CANADA

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/465,318	TAPADAR ET AL.
	Examiner	Art Unit
	ABUL K. AZAD	2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 February 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,18-29 and 31-44* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,18-29 and 31-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
    application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____ .

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   This action is in response to the communication filed on February 19, 2004.

2.   Claims 1-16, 18-29 and 31-44 are pending in this action. Claims 1 and 27 have

been amended. Claims 17 and 30 have been canceled. Claims 39-44 have been newly

added.

3.   Applicant's arguments with respect to claims 1-16, 18-29 and 31-38 have been

considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-6, 12-16, 22-29, 33-38 and 39-44 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Fujino et al. (US 5,436,899) in view of Kanerva et al. (US

5,793,744).

As per claim 1, Fujino teaches, "a method of transmitting comprising":

"detecting the start of an information segment being generated in real-time" (Fig.

17, element 51(VDET), here voice detector detect voice as the start of information

segment at real time, because the communication take place in real time);

"editing and buffering the information segment or a first representation thereof to produce a second representation" (col. 13, lines 18-36, here redundant bits and/or silence part are discarded or compressed as editing the information segment and by doing that it produces a second representation of the input signal; col. 25, lines 12-48 shows a buffering after the multiplexing).

Fujino teaches, "they are ready for transmission, the speed difference absorption buffer 142, is used as a transmission holding buffer" (col. 25, lines 12-48).

Fujino does not explicitly teach, "after transmission resources have been allocated, starting to transmit the second representation". However, Kanerva teaches, "after transmission resources have been allocated, starting to transmit the second representation" (Abstract, col. col. 9, lines 1-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Kanerva's teaching in the invention of Fujino because Kanerva teaches his invention introduce to reduce transmission power consumption, less temperature problems and simpler timing of reception (col. 4, lines 15-22).

As per claim 2, Fujino teaches, "wherein editing and buffering comprises editing and then buffering" (Fig. 35, element 140 (PAD) as buffer is comprises after element 138 (cod) as editing).

As per claim 3, Fujino teaches, "wherein editing is done on the information segment to produce a shortened information segment" (col. 13, lines 18-36, here

discarding redundant bits and compressing silent to produce a shortened information segment).

As per claim 4, Fujino teaches, "wherein editing is done on the first representation which is a framed version of the information segment to produce a shortened information segment" (col. 12, lines 58-67, particularly reads on "a method for determining the discard in the current transmission frame according to the past discarding history").

As per claim 5, Fujino teaches, "wherein buffering is done on the shortened information segment to produce the second representation" (col. 25, lines 12-48, here buffering is done on the shortened information segment to produce packets as second representation).

As per claim 6, Fujino teaches, "wherein buffering is done on a frame version of the shortened information segment to produce the second representation" (col. 25, lines 12-48, here packets are forms on a frame version of the shortened information).

As per claim 12, Fujino teaches, "wherein upon detecting the start of the information segment, the method further comprises immediately requesting transmission resources to transmit the information segment" (col. 14, lines 47-62, particularly reads on "a call detector (CDET) 46 for detecting a call through monitoring by SS and SR signals").

As per claim 13, Fujino teaches, "wherein editing the information segment to produce a shortened information segment comprises time compressing the information

segment" (col. 13, lines 18-36, since redundant bits and silences are compressed, therefore a time compressing the information segment is achieved).

As per claim 14, Fujino teaches, "wherein time compressing the information segment comprises removing repetitions and/or short pauses present in the segment" (col. 13, lines 18-36, "repetitions" reads on "redundant" and "short pauses" reads on "silent").

As per claim 15, Fujino teaches, "wherein before transmitting the second representation, the method further comprises passing the second representation through a frame erasure concealment unit to prevent corruption" (col. 13, lines 18-36, particularly reads on "discarding supplementary bits necessarily deteriorates sound quality, but permits transmission of core bits, thus ensuring the minimum sound quality provided by core bits").

As per claim 16, Fujino teaches, "wherein before transmitting the second representation, the method further comprises placing the second representation in one or more packets for transmission" (col. 25, lines 35-48, packets are transmitted).

As per claim 22, Fujino teaches, "wherein the information segment is a speech segment" (col. 7, lines 52-67, a voice coder is used for a speech segment).

As per claim 23, Fujino teaches, "wherein editing the framed version of the information segment to produce a shortened information segment comprises removing redundant frames" (col. 13, lines 18-36, here discarding redundant bits and compressing silent to produce a shortened information segment).

As per claim 24, Fujino teaches, "wherein removing redundant frames comprises removing frames which contain repetitions and/or short pauses" (col. 13, lines 18-36, "repetitions" reads on "redundant" and "short pauses" reads on "silent").

As per claim 25, Fujino teaches, "wherein before transmitting the second representation, the method further comprises passing the second representation through a frame erasure concealment unit to prevent corruption" (col. 13, lines 18-36, particularly reads on "discarding supplementary bits necessarily deteriorates sound quality, but permits transmission of core bits, thus ensuring the minimum sound quality provided by core bits").

As per claim 26, Fujino teaches, "wherein before transmitting the second representation, the method further comprises placing the second representation in one or more packets for transmission" (col. 25, lines 35-48, packets are transmitted).

As per claim 39, Fujino teaches, "monitoring a state of a buffer containing the information segment or the first representation and performing the editing so that the buffer does not overflow" (Fig. 59 A, element Buffer RAM).

As per claim 40, Fujino teaches, "performing the editing at least long enough to compensate for a resource acquisition time" (col. 7, lines 43-51).

As per claim 43, Fujino does not explicitly teach, "requesting the transmission resources form the multi-access system and receiving a resource allocation from the multi-access system after the resource allocation delay". However, Kanerva teaches, "requesting the transmission resources form the multi-access system and receiving a resource allocation from the multi-access system after the resource allocation delay"

(col. 6, lines 1-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Kanerva's teaching in the invention of Fujino because Kanerva teaches his invention introduce to reduce transmission power consumption, less temperature problems and simpler timing of reception (col. 4, lines 15-22).

As per claims 27-29, 33-38, 41, 42 and 44, they are interpreted and thus rejected for the same reasons set forth in the rejection of method claims 1-6, 12-16, 22-26, 39, 40 and 43 because claims 27-30 and 33-38 have similar scope.

6.   Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. (US 5,436,899) in view of Kanerva et al. (US 5,793,744) as applied to claim 1 above, and further in view of Rappaport (Wireless Communications Principles and Practice).

As per claims 7, 8, 10 and 11, Fujino does not explicitly teach:

"wherein buffering and editing comprises buffering and then editing";

"wherein buffering is done on the information segment to produce a buffered information segment";

"wherein editing is done on a buffered information segment to produce a shortened information segment";

"wherein editing is done on the first representation which is a framed version of the buffered information segment to produce shortened information segment";

"wherein editing is done on the first representation which is a framed version of the buffered information segment to produce shortened information segment".

However, Rappaport teaches:

"wherein buffering and editing comprises buffering and then editing" (see For example Figs 7.6, 7.9 and 7.10);

"wherein buffering is done on the information segment to produce a buffered information segment"(see For example Figs 7.6, 7.9 and 7.10);

"wherein editing is done on a buffered information segment to produce a shortened information segment" "(see For example Figs 7.6, 7.9 and 7.10, here Buffered information segment is encoded (edited) to produce shortened information segment);

"wherein editing is done on the first representation which is a framed version of the buffered information segment to produce shortened information segment" (see For example Figs 7.6, 7.9 and 7.10, here Buffered information segment is encoded (edited) to produce shortened information segment).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Rappaport's teaching, buffering and then editing, so that buffered information segment is produced for editing, to reduce loss of core information to improve efficiency of the system.

As per claims 9, Fujino teaches, "wherein buffering is done the first representation which is a framed version of the information segment to produce a buffered information segment" (col. 25, lines 35-47).

7.   Claims 18-21 and 31-32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Fujino et al. (US 5,436,899) as applied to claims 1 and 27 above, and

further in view of Applicant's admitted prior art (Fig. 1).

As per claims 18-21, Fujino does not explicitly teaches:

"wherein the multi-access system is a multi-access wireless system";

"wherein the information segment is transmitted from a mobile station to a base

station";

"wherein the transmission resources consist of one or more information

channels";

"wherein each information channel is a radio frequency (RF) channel".

However, Admitted prior art teaches:

"wherein the multi-access system is a multi-access wireless system" (Fig. 1,

Pages 6-8, TDMA);

"wherein the information segment is transmitted from a mobile station to a base

station" (Fig. 1, Pages 6-8);

"wherein the transmission resources consist of one or more information

channels" (Fig. 1, Pages 6-8);

"wherein each information channel is a radio frequency (RF) channel" (Fig. 1,

Pages 6-8, particularly Page 7, RF transmission resource).

Fujino teaches a statistical multiplexing method (see col. 1, lines 34-54, TDM

multiplexing method for multimedia telecommunication, such as packet network, an

ATM net work "see col. 6, lines 18-29"), however as stated above does not explicitly

teaches a multi-access wireless system, however which is known transmission system

as acknowledges by applicants. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to adapt a wireless telecommunication

for sending information from mobile station to base station using RF transmission

channel known way because to achieve a mobility in the communication sector.

As per claims 31 and 32, they are interpreted and thus rejected for the same

reasons set forth in the rejection of claims 18 and 19, because claims 31 and 32 have

similar scope.

Contact Information

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Abul K. Azad** whose telephone number is **(703) 305-**

3838.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Richemond Dorvil**, can be reached at **(703) 305-9645.**

Any response to this action should be mailed to:

Commissioner for Patents

P.O. Box 1450

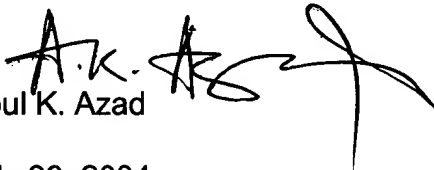**Alexandria, VA 22313-1450**

Or faxed to:

(703) 872-9314

(For informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to 2121 Crystal Drive, Arlington,

VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should

be directed to the Technology Center's Customer Service Office at telephone number

(703) 306-0377.

Abul K. Azad

July 23, 2004